Washington

Large Fire Update Report

Reference Guide

Bell Plain Complex – September 2011

2012

Fire Season

Prepared by:
Office of State Fire Marshal

Mobilization Unit

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This report is a compilation of current fire and weather information that is obtained from a variety of sources*, i.e., Washington DNR, Washington Fire Service, Forest Service, Bureau of Land Management and National Weather Service. The information is formatted into an easy to read report with the goal of providing the most information possible.

READING THE REPORT

Information current as of Time, Month Day, Year: This is the date and time we have compiled the report.

National Fire Activity: National fire activity is included to give an idea of the number and severity of fires happening around the country. It also assists in explaining why there may be a shortage of resources. Preparedness level (PL) correlates to the number of resources being deployed nationally, i.e., a region may be in PL 5 while nationally, the PL is 2. Initial attack activity includes all of the reported wildland fire responses nationally. Also included are states that currently have large uncontained fires to give an idea of where resources are moving.

Northwest Area: Fire activity specific to Region 6 (Washington/Oregon). Initial attack activity includes all reported wildland fire responses for agencies in the region.

New Large Fires: Details on new large fires in Washington and Oregon; fire name, location, size, containment, IMT assigned, etc. An InciWeb link will be provided if available. If the fire is a Mobilization incident, the date/time mobe was approved and ended will be included.

Ongoing Incidents: Details on large fires currently happening in Washington and Oregon; fire name, location, size, containment, IMT assigned, etc. An InciWeb link will be provided if available. If the fire is a Mobilization incident, the date/time mobe was approved and ended will be included.

Weather Watches & Warnings: Information from the National Weather Service to include fire weather watches, red flag warnings, etc.

Weather Synopsis: Fire specific weather activity information from the Northwest Coordination Center.

Large Fire Potential: Outlook of large fire potential based on fuel models, weather, historical fires and possible trigger events.

OVERVIEW OF NATIONAL FIRE PICTURE

Nine US Forest Service Regions

Region 1 – Northern Rockies
Region 2 – Rocky Mountain
Region 3 – Southwestern
Region 4 – Intermountain
Region 5 – Pacific Southwest
Region 6 – Pacific Northwest
Region 8 – Southern
Region 9 – Eastern
Region 10 – Alaska

Geographic Areas

The United States and Alaska are divided into 11 Geographic Areas for the purpose of incident management and mobilization of resources (people, aircraft, ground equipment). Within each Area, there is an interagency Geographic Area Coordinating Group, which is made up of Fire Directors from each of the Federal and State land management agencies from within the Area.

The primary mission of the GACC is logistical coordination; the Center also has support programs in Predictive Services, Intelligence, and in several Center's Fire Information. Predictive Services consists primarily of professional meteorologists who monitor weather and fuel conditions, conduct briefings, produce fire weather related products, liaison with the National Weather Service, and oversee all aspects of the Remote Automated Weather System (RAWS).

Each GACC provides additional support to their respective geographic area's wildland fire community through training, workshops, special projects, and other tasks. Except for dispatch of air tankers and lead planes based outside the dispatch center responsibility the fire is located in, the GACC does not have initial-attack dispatch responsibilities.

Overview of Regional Fire Picture

The Northwest Coordination Center (NWCC) is the Region 6 GACC and is located in Portland, Oregon.

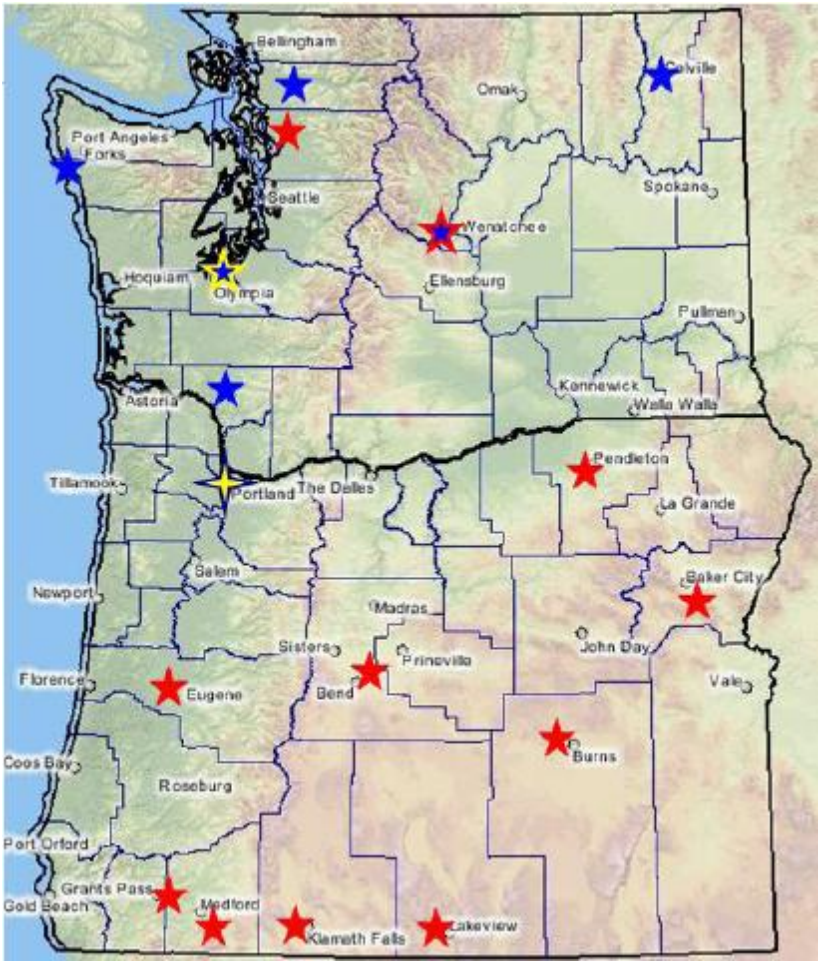
GACC in Portland

Interagency Dispatch Center (Fed/Fed or Fed/State)

Interagency Dispatch Center (Fed/WA-DNR)

WA-DNR Region Dispatch

WA-DNR Headquarters



What are National Preparedness Levels?

The National Multi-Agency Coordination (MAC) Group establishes Preparedness Levels throughout the calendar year to assure that firefighting resources are ready to respond to new incidents. Preparedness Levels are dictated by burning conditions, fire activity, and especially resource availability.

The Preparedness Levels range from 1 to 5, with 5 being the highest level. Each Preparedness Level has specific management directions.

Preparedness Level 1 – No large fire activity is occurring. Most Geographic Areas are experiencing low to moderate fire danger. There is little or no commitment of national resources and no significant support to the National Response Plan (NRP).

Preparedness Level 2 – Several regions of the country are experiencing high to extreme fire danger. Wildland fire activity is increasing or support to the NRP is occurring in one or more regions. Mobilization of resources among Geographic Areas is minimal.

Preparedness Level 3 – Two or more regions of the country are experiencing wildland, prescribed fire, or support to the NRP, requiring a major commitment of national resources. Additional resources are being ordered through the National Interagency Coordination Center. Incident Management Teams (IMT) are committed in two or more regions for wildland fire or to support the NRP, or 275 crews are committed nationally.

Preparedness Level 4 – Wildland fire activity and/or support to the NRP has escalated requiring Type 1 IMT in two or more Geographic Areas. At this level, five Type 1 IMTs or 425 crews are committed nationally. Some firefighting resources may be pre-positioned to respond to predicted incidents.

Preparedness Level 5 – Several Geographic Areas are experiencing major incidents which have the potential to exhaust all agency fire resources. When 500 crews are committed nationally. Canadian Liaison and a coordinator for military mobilization are asked to participate in national planning.

LIGHTNING

Negative Lightning

A bolt of lightning usually begins when an invisible negatively charged stepped leader stroke is sent out from the cloud. As it does so, a positively charged streamer is sent out from the positively charged ground or cloud. When the leader and streamer meet, the electrical discharge takes place up the streamer into the cloud. This return stroke is the most luminous part of the strike, and the part that is really visible.

Most lightning strikes usually last about a quarter of a second. Sometimes several strokes will travel up and down the same leader strike, causing a flickering effect. Thunder is caused when the discharge rapidly super heats the air around the strike, causing a shock wave to be sent out.

Research published in 2002 indicates that every lightning bolt also causes a similar but weaker electrodynamic pulse in the mesosphere, located 50 to 80 km (31 to 53 miles) above the earth, and above into the thermosphere. This type of lightning is known as negative lightning due to the discharge of negative charge from the cloud, and accounts for over 95% of all lightning.

Statistics: an average bolt of negative lightning carries a current of 30 kiloamperes, transfers a charge of 5 coulombs, has a potential difference of about 100 megavolts, and lasts a few milliseconds.

Positive Lightning

Positive lightning makes up less than 5% of all lightning. It occurs when the stepped leader forms at the positively charged cloud tops, with the consequence that a positively charged streamer issues from the ground. The overall effect is a discharge of positive charges to the ground.

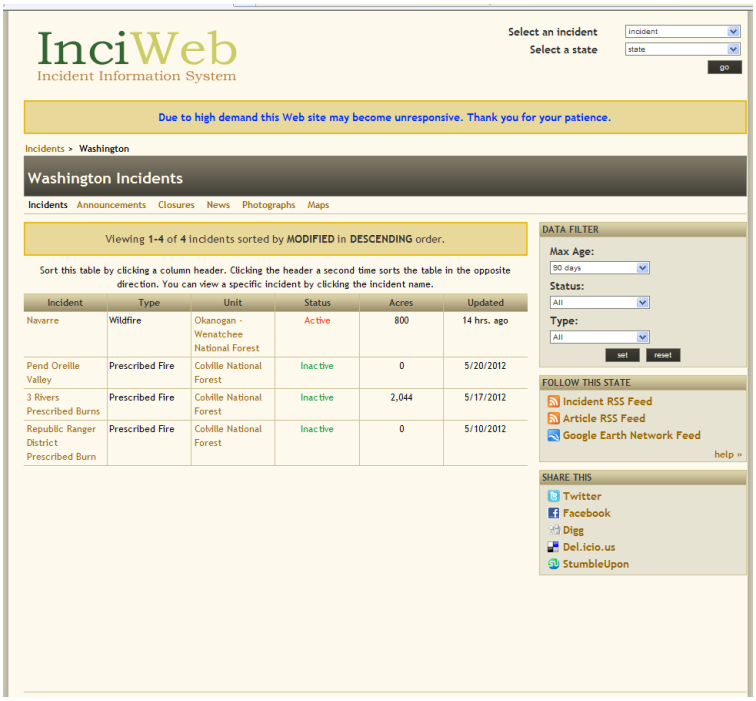
Research carried out after the discovery of positive lightning in the 1970s showed that positive lightning bolts are typically six to ten times more powerful than negative bolts, last around ten times longer, and can strike several miles distant from the clouds. During a positive lighting strike, huge quantities of ELF and VLF radio waves are generated.

As a result of their power, positive lightning strikes are considerably more dangerous. At the present time aircraft are not designed to withstand such strikes, since their existence was unknown at the time standards were set, and the dangers unappreciated until the destruction of a glider in 1999. It has since been suggested that it may have been positive lightning that caused the crash of Pan Am flight 214 in 1963. Positive lighting is now also thought to be responsible for many forest fires.

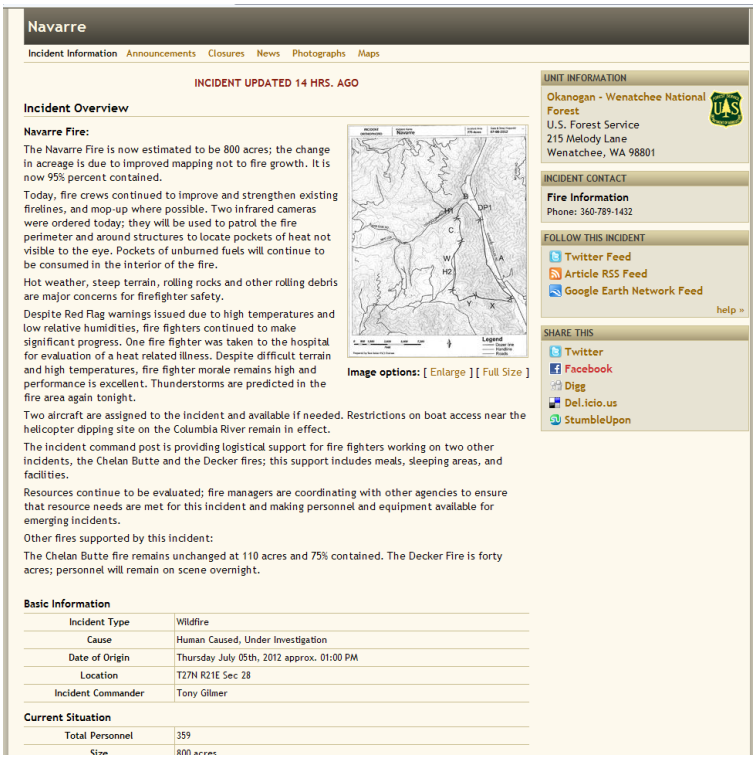
Information from www.crystalinks.com/lightning

INCIWEB – www.inciweb.org

Incidents can be searched by state or incident name, the example below shows incidents in Washington State.



The incident page includes more detailed information including the current situation, outlook and weather.



MAPS

National Large Incident Map: Shows location of large fires across the country.

Seasonal Significant Fire Potential Map: Shows fire potential across the country. *This map will only be included in the Large Fire Update at the beginning of each month.*

Monthly Significant Fire Potential Map: Shows fire potential across the country for the current month. *This map will only be included in the Large Fire Update at the beginning of each month.*

Significant Fire Potential Map: Shows daily fire threat nationally.

NWCC Large Fire Map: Shows current large fires in Region 6.

Lightning Map: Shows lightning for a specific time period. *This map will only be included during periods of high lightning activity.*

National Weather Service Maps: Various maps showing red flag warnings, fire weather watches and hazardous weather outlooks.

DEFINITIONS

Advisory: Highlights special weather conditions that are less serious than a warning. Used for events that may cause significant inconvenience, and if caution is not exercised, it could lead to situations that may threaten life and/or property.

Anchor Point: An advantageous location, usually a barrier to fire spread, from which to start building a fire line. An anchor point is used to reduce the chance of firefighters being flanked by fire.

Backfire: A fire set along the inner edge of a fireline to consume the fuel in the path of a wildfire and/or change the direction of force of the fire's convection column.

Burning Period: That part of each 24-hour period when fires spread most rapidly, typically from 10:00 a.m. to sundown.

Class of Fire: (as to size of wildland fires):
Class A - 1/4 acre or less
Class B - more than 1/4 but less than 10 acres
Class C - 10 acres to 100 acres
Class D - 100 to 300 acres
Class E - 300 to 1,000 acres
Class F - 1,000 to 5,000 acres
Class G - 5,000 acres or more

Cold Front: The leading edge of a relatively cold air mass that displaces warmer air. The heavier cold air may cause some of the warm air to be lifted. If the lifted air contains enough moisture, the result may be cloudiness, precipitation, and thunderstorms. If both air masses are dry, no clouds may form. Following the passage of a cold front in the Northern Hemisphere, westerly or northwesterly winds of 15 to 30 or more miles per hour often continue for 12 to 24 hours.

Command Staff: The command staff consists of the information officer, safety officer and liaison officer. They report directly to the incident commander and may have assistants.

Complex: Two or more individual incidents located in the same general area which are assigned to a single incident commander or unified command.

Containment or Contained: The hazard has stabilized, however it has not been tested by time, weather, or other factors. Typically, the planning for demobilization of resources would begin at this time. Prudent judgment is necessary during this period to determine which resources are demobilized. Mobilization has not ended and resources can be called back if needed.

Controlled: Stabilization of the hazard has been tested or improved during the 24-36 hours since contained. For purposes of mobilization, this would be the end of mobilization, although the responsible agencies may still have some period of time on the incident.

Crown Fire: A fire where flames travel from tree to tree at the level of the tree's crown or top.

Crowning: Movement of a fire from the understory into the crown of a forest canopy.

Defensible Space: An area either natural or manmade where material capable of causing a fire to spread has been treated, cleared, reduced, or changed to act as a barrier between an advancing wildland fire and the loss to life, property, or resources. In practice, "defensible space" is defined as an area a minimum of 30 feet around a structure that is cleared of flammable brush or vegetation.

Direct Attack: Any treatment of burning fuel, such as by wetting, smothering, or chemically quenching the fire or by physically separating burning from unburned fuel.

Division: Divisions are used to divide an incident into geographical areas of operation. Divisions are established when the number of resources exceeds the span-of-control of the operations chief. A division is located with the Incident Command System organization between the branch and the task force/strike team.

Dry Thunderstorm: Generally a high-based thunderstorm when lightning is observed, but little if any precipitation reaches the ground. Most of the rain produced by the thunderstorm evaporates into relatively dry air beneath the storm cell. May also be referred to as *dry lightning*.

Energy Release Component (ERC): The computed total heat released per unit area (British thermal units per square foot) within the fire front at the head of a moving fire.

Extended Attack Incident: A wildland fire that has not been contained or controlled by initial attack forces and for which more firefighting resources are arriving, en route, or being ordered by the initial attack incident commander.

Extreme Fire Behavior: "Extreme" implies a level of fire behavior characteristics that ordinarily precludes methods of direct control action. One of more of the following is usually involved: high rate of spread, prolific crowning and/or spotting, presence of fire whirls, strong convection column. Predictability is difficult because such fires often exercise some degree of influence on their environment and behave erratically, sometimes dangerously.

Evacuation Levels:

Level One - Evacuation has become a likely possibility and it is suggested that you being preparations for evacuations.

Level Two - The situation now warrants notification to affected persons that evacuation may become necessary in the immediate future. It is suggested that you complete necessary preparations and be ready for the order to evacuate on a moments notice.

Level Three - In the interest of protecting life and property the Sheriff's Office strongly suggests that affected persons evacuate immediately due to the imminent threat. Protection and security of the evacuated zone will be a high priority of the Sheriffs Office and access into the area will be restricted to emergency response personnel only.

Suggested evacuation routes will be determined as well as locations for emergency food and shelter. You will also be advised of options for livestock and pet shelter.

Fine (Light) Fuels: Fast-drying fuels, generally with a comparatively high surface area-to-volume ratio, which are less than 1/4-inch in diameter and have a timelag of one hour or less. These fuels readily ignite and are rapidly consumed by fire when dry.

Firebrand: Any source of heat, natural or manmade, capable of igniting wildland fuels; flaming or glowing fuel particles that can be carried naturally by wind, convection currents, or gravity into unburned fuels.

Fire Front: The part of a fire within which continuous flaming combustion is taking place. Unless otherwise specified the fire front is assumed to be the leading edge of the fire perimeter. In ground fires, the fire front may be mainly smoldering combustion.

Fire Shelter: An aluminized tent offering protection by means of reflecting radiant heat and providing a volume of breathable air in a fire entrapment situation. Fire shelters should only be used in life-threatening situations, as a last resort.

Fire Shelter Deployment: The removing of a fire shelter from its case and using it as protection against fire. **A Shelter Deployment is a serious incident. This is a tool that is used as a last resort. Anytime a fire shelter is deployed, an investigation is conducted.**

Fire Storm: Violent convection caused by a large continuous area of intense fire. Often characterized by destructively violent surface indrafts, near and beyond the perimeter, and sometimes by tornado-like whirls.

Fire Triangle: Instructional aide in which the sides of a triangle are used to represent the three factors (oxygen, heat, fuel) necessary for combustion and flame production; removal of any of the three factors causes flame production to cease.

Fire Traffic Area: The FTA was developed by aerial firefighting personnel to provide a standardized initial attack airspace structure to enhance air traffic separation over wildfire (or all risk) incidents.

Fire Weather: Weather conditions that influence fire ignition, behavior and suppression.

Fire Weather Watch: Issued to advise of conditions which could result in extensive wildland fire occurrence or extreme fire behavior, which are expected to develop in the next 12 to 48 hours, but not more than 72 hours. In cases of dry lightning, a Fire Weather Watch may be issued for the next 12 hours.

Fire Wind: A thermally driven wind blowing radially inward toward a fire, produced by horizontal temperature differences between the heated air above the fire and the surrounding cooler free atmosphere.

Flame Length: The distance between the flame tip and the midpoint of the flame depth at the base of the flame (generally the ground surface); an indicator of fire intensity.

Flare-up: Any sudden acceleration of fire spread or intensification of a fire. Unlike a blow-up, a flare-up lasts a relatively short time and does not radically change control plans.

Flashy Fuels: Fuels such as grass, leaves, draped pine needles, fern, tree moss and some kinds of slash, that ignite readily and are consumed rapidly when dry. Also called fine fuels.

Fuel Moisture (Fuel Moisture Content): The quantity of moisture in fuel expressed as a percentage of the weight when thoroughly dried at 212 degrees Fahrenheit.

Fuel Type: An identifiable association of fuel elements of a distinctive plant species, form, size, arrangement, or other characteristics that will cause a predictable rate of fire spread or difficulty of control under specified weather conditions.

General Staff: The group of incident management personnel reporting to the incident commander. They may each have a deputy, as needed. Staff consists of operations section chief, planning section chief, logistics section chief, and finance/administration section chief.

Hazardous Weather Outlook: A narrative statement produced by the National Weather Service, frequently issued on a routine basis, to provide information regarding the potential of significant weather expected during the next 1 to 5 days.

Heat Advisory: Issued within 12 hours of the onset of the following conditions: heat index of at least 105°F but less than 115°F for less than 3 hours per day, or nighttime lows above 80°F for 2 consecutive days

High Wind Advisory: Issued by the National Weather Service when high wind speeds may pose a hazard. The criteria for this advisory varies from state to state.

High Wind Warning: Issued by the National Weather Service when high wind speeds may pose a hazard or is life threatening. The criteria for this warning varies from state to state.

High Wind Watch: Issued by the National Weather Service when there is the potential of high wind speeds developing that may pose a hazard or is life threatening. The criteria for this watch varies from state to state.

Hotshot Crew: A highly trained fire crew used mainly to build fireline by hand.

Humidity Recovery: The change in relative humidity over a given period of time; generally between late evening and sunrise. The moisture change in the fine fuels during this period is directly related to the amount of humidity recovery.

Incident: A human-caused or natural occurrence, such as wildland fire, that requires emergency service action to prevent or reduce the loss of life or damage to property or natural resources.

Ignition Trigger: The particular agent responsible for a mass ignition episode. The two ignition triggers are lightning and humans. When combined with Significant Weather Triggers (wind and dry unstable air) the probability of a large fire increases.

Incident Action Plan (IAP): Contains objectives reflecting the overall incident strategy and specific tactical actions and supporting information for the next operational period. The plan may be oral or written. When written, the plan may have a number of attachments, including: incident objectives, organization assignment list, division assignment, incident radio communication plan, medical plan, traffic plan, safety plan, and incident map.

Incident Command Post (ICP): Location at which primary command functions are executed. The ICP may be co-located with the incident base or other incident facilities.

Incident Command System (ICS): The combination of facilities, equipment, personnel, procedure and communications operating within a common organizational structure, with responsibility for the management of assigned resources to effectively accomplish stated objectives pertaining to an incident.

Incident Commander (IC): Individual responsible for the management of all incident operations at the incident site.

Incident Management Team: The incident commander and appropriate general or command staff personnel assigned to manage an incident. Depending on the complexity and size of incident will determine the type of Incident Management Team deployed.

Incident Objectives: Statements of guidance and direction necessary for selection of appropriate strategy(ies), and the tactical direction of resources. Incident objectives are based on realistic expectations of what can be accomplished when all allocated resources have been effectively deployed.

Initial Attack: The actions taken by the first resources to arrive at a wildfire to protect lives and property, and prevent further extension of the fire.

Ladder Fuels: Fuels which provide vertical continuity between strata, thereby allowing fire to carry from surface fuels into the crowns of trees or shrubs with relative ease. They help initiate and assure the continuation of crowning.

Large Fire: 1) For statistical purposes, a fire burning more than a specified area of land, e.g., 300 acres. 2) A fire burning with a size and intensity such that its behavior is determined by interaction between its own convection column and weather conditions above the surface.

Lightning Activity Levels (LAL):
LAL 1 - No thunderstorms.
LAL 2 - Few building cumulus with isolated thunderstorms.
LAL 3 - Much building cumulus with scattered thunderstorms. Light to moderate rain.
LAL 4 - Thunderstorms common. Moderate to heavy rain reaching the ground.
LAL 5 - Numerous thunderstorms. Moderate to heavy rain reaching the ground.
LAL 6 - Dry lightning (same as LAL 3 but without the rain).

Mop-up: To make a fire safe or reduce residual smoke after the fire has been controlled by extinguishing or removing burning material along or near the control line, felling snags, or moving logs so they won't roll downhill.

National Fire Danger Rating System: A uniform fire danger rating system used in the United States that focuses on the environmental factors that impact the moisture content of fuels. Fire danger is rated daily over large administrative areas, such as national forests.

Operational Period: The period of time scheduled for execution of a given set of tactical actions as specified in the Incident Action Plan. Operational periods can be of various lengths, although usually not more than 24 hours.

Prescribed Fire: A management ignited or natural wildland fire that burns under specified conditions where the fire is confined to a predetermined area and produces the fire behavior and fire characteristics required to attain planned fire treatment and resource management objectives.

Red Flag: A fire weather program which highlights the onset of critical weather conditions conducive to extensive wildfire occurrences.

Red Flag Warning: A term used by fire-weather forecasters to call attention to limited weather conditions of particular importance that may result in extreme burning conditions. Issued when it is an on-going event or the fire weather forecaster has a high degree of confidence that Red Flag criteria will occur within 24 hours of issuance.

Red Flag criteria occurs whenever a geographical area has been in a dry spell for a week or two, or for a shorter period , if before spring green-up or after fall color, and the National Fire Danger Rating System (NFDRS) is high to extreme and the following forecast weather parameters are forecasted to be met:

1) a sustained wind average 15 mph or greater
2) relative humidity less than or equal to 25 percent and
3) a temperature of greater than 75 degrees F

A Fire Weather Watch may be issued prior to the Red Flag Warning.

Severe Thunderstorm: A thunderstorm that produces a tornado, winds of at least 58 mph (50 knots), and/or hail at least ¾" in diameter. Structural wind damage may imply the occurrence of a severe thunderstorm.

Severe Thunderstorm Warning: Issued when either a severe thunderstorm is indicated by a thunderstorm producing hail 3/4 inch or larger in diameter and/or winds equal or exceed 58 miles an hour. They are usually issued for a duration of one hour. They can be issued without a Severe Thunderstorm Watch being already in effect.

Severe Thunderstorm Watch: Issued by the National Weather Service when conditions are favorable for the development of severe thunderstorms in and close to the watch area. They are usually issued for a duration of 4 to 8 hours. They are normally issued well in advance of the actual occurrence of severe weather.

Special Fire Weather: Meteorological services uniquely required by user agencies which cannot be provided at an NWS office during normal working hours. Examples are on-site support, weather observer training, and participation in user agency training activities.

Spotting: Behavior of a fire producing sparks or embers that are carried by the wind and start new fires beyond the zone of direct ignition by the main fire.

Temporary Flight Restrictions (TFR): A restriction requested by an agency and put into effect by the Federal Aviation Administration in the vicinity of an incident which restricts the operation of nonessential aircraft in the airspace around that incident.

Torching: The ignition and flare-up of a tree or small group of trees, usually from bottom to top.

Trigger Point(s): Geographic points on the ground or specific points in time where an escalation or alternative of management actions is warranted. These points are defined and the management actions to be taken are clearly described in an Incident Action Plan or Evacuation Plan. Timely implementation of the actions when the fire reaches the action point is generally critical to successful accomplishment of the objectives.

Watch: A watch is used when the risk of a hazardous weather event has increased significantly, but its occurrence, location, and/or timing is still uncertain. It is intended to provide enough lead time so that those who need to set their plans in motion can do so.

Wind Advisory: Sustained winds 25 to 39 mph and/or gusts to 57 mph. Issuance is normally site specific. However, winds of this magnitude occurring over an area that frequently experiences such winds.

Wildland Fire Use: The management of naturally ignited wildland fires to accomplish specific pre-stated resource management objectives in predefined geographic areas outlined in Fire Management Plans.

Wildland Urban Interface: The line, area or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.